

# California Education and the Environment Initiative

Increasing Environmental Literacy for K–12 Students...

Because the Future is in Their Hands



## TEACH COMMON CORE STANDARDS WITH THE EEI CURRICULUM

Created with your needs in mind, this document shows the correlation between the EEI Curriculum and the California Common Core State Standards. By teaching the EEI unit lessons in your classroom, you will be simultaneously addressing the Common Core standards depicted in this guide.

### 2.2.e. and 2.2.f.—Flowering Plants in Our Changing Environment



In this unit students will learn how environmental and human factors impact the germination, development, and growth of plants. They will also gain an understanding of how both flowers and fruits are an essential part of plant reproduction. Students will learn how humans and plants are connected and dependent on one another. They will explore how both human beings and the environment impact plants.

		RI.2.1	RI.2.3	RI.2.4	RI.2.6	RI.2.7	RI.2.10	W.2.2	W.2.7	W.2.8	SL.2.1	SL.2.2	L.2.4
LESSONS	California Connections	✓		✓		✓	✓					✓	
	1	✓		✓		✓	✓			✓		✓	✓
	2	✓		✓			✓		✓		✓	✓	✓
	3	✓		✓		✓	✓			✓	✓	✓	✓
	4	✓		✓		✓	✓			✓		✓	✓
	5	✓			✓	✓				✓	✓	✓	✓
	Traditional Assessment		✓	✓				✓		✓			
	Alternative Assessment	✓	✓					✓		✓	✓	✓	
	COMMON CORE STANDARDS												

**Note:** For your reference, the list of California Common Core State Standards abbreviations is on the following page.

## Using the EEI-Common Core Correlation Matrix

The matrix on the front page identifies a number of Common Core standards that are supported by this EEI unit. However, the check marks in the matrix do not necessarily signify that the Common Core standards checked will be taught to mastery by using this EEI unit alone. Teachers are encouraged to select which Common Core standards they wish to emphasize, rather than teaching to every indicated standard. By spending more time on selected standards, students will move toward greater Common Core proficiency in comprehension, critical thinking and making reasoned arguments from evidence. Teaching this EEI unit will provide opportunities for teachers to implement the shift in instructional practice necessary for full Common Core implementation.

## California Common Core State Standards Abbreviations

- **CCCSS:** California Common Core State Standards
- **L:** Language Standards
- **RI:** Reading Standards for Informational Text
- **SL:** Speaking and Listening Standards
- **W:** Writing Standards

**Note:** Since each Common Core standard includes a breadth of skills, in this correlation, the portion of the standard description that is featured in the Common Core Standards and Applications is cited, using “...” to indicate omitted phrases. For a list of the complete standard descriptions, please see the Common Core Reference Pages located on page 16 of this document.

## A Note about Common Core Speaking and Listening Standards

Many of the EEI units provide various learning structures, materials, and groupings that lead toward students working in pairs or small groups to discuss concepts and ideas. This supports the skill in Speaking and Listening Standard 1 “Participate effectively in a range of collaborative discussions (one-on-one, groups...) with diverse partners.” With prior instruction in collaborative discussion techniques, students can be placed in pairs or small groups to discuss the lesson topics. To aid in teacher planning, the lessons are listed below along with their learning structures for whole class, pairs/partners, and/or small groups:

- **Lesson 1:** Whole class
- **Lesson 2:** Whole class, 4 groups
- **Lesson 3:** Whole class, 3 or 4 groups
- **Lesson 4:** Whole class
- **Lesson 5:** Whole class, 3 or 4 groups

## National Geographic Resources

- **Habitats** wall map (Lesson 3)

## Unit Assessment Options

Assessments	Common Core Standards and Applications
<b>Traditional Assessment</b>	
Students answer fill-in-the-blank and short answer questions and draw diagrams and illustrations.	<p><b>RI.2.3:</b> Describe the connection between a series of...scientific ideas or concepts, or steps...in a text.</p> <p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text relevant to a <i>grade 2 topic or subject area</i>...</p> <p><b>W.2.2:</b> Write informative/explanatory texts...</p> <p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>
<b>Alternative Assessment</b>	
Students create collages of assigned plants and then discuss and answer scientific questions based off of the collages.	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why,</i> and <i>how</i> to demonstrate understanding of key details in a text.</p> <p><b>RI.2.3:</b> Describe the connection between...scientific ideas or concepts...</p> <p><b>SL.2.1:</b> Participate in collaborative conversations with diverse partners about <i>grade 2 topics and texts</i> with peers and adults in...groups.</p> <p>b) Build on others' talk in conversations by linking their comments to the remarks of others.</p> <p><b>SL.2.2:</b> Recount or describe key ideas...from...information presented orally or through other media.</p> <p><b>W.2.2:</b> Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.</p> <p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>

## Lesson 1: Flowers to Fruit

Students read about California's first orange tree to learn about plant reproduction. They participate in an activity about the orange tree's reproductive life cycle and learn about words with multiple meanings. They draw and label the reproductive parts of the orange plant.



Use this correlation in place of the **Procedures** on page 40 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
<b>Vocabulary Development</b>	
<p>Use the <b>Dictionary Workbook</b> and the vocabulary <b>Word Wall Cards</b> to introduce new words to students as appropriate. Ask students to write their name in the space provided in the dictionary. These documents are provided separately.</p> <p><b>Tip:</b> If <b>Dictionary Workbooks</b> need to be reused from year to year, students should not write in them.</p>	<p><b>L.2.4e:</b> Use glossaries and beginning dictionaries...to determine or clarify the meaning of words and phrases...</p>
<b>Step 1</b>	
<p>Distribute a copy of <b>California Connections: Mother Orange Tree</b> reader to each student. Call on students to read a page at a time. Talk about the photographs or map on each page. Review the terms "bear," "bud," "flower," "fruit," "grove," "reproduction," "ripen," "seed," and "seedling" using the <b>Word Wall Cards</b>. At the end of the story, ask students, "Why is this historic tree called 'mother'?" (<i>Many orange trees all over California came from the seeds of this one tree.</i>)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as...<i>why</i>...to demonstrate understanding of key details in a text.</p> <p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text relevant to a <i>grade 2 topic or subject area</i>...</p> <p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from a text read aloud...</p>
<b>Step 2</b>	
<p>Project <b>Parts of an Orange Tree</b> (Visual Aid #1). Review the parts with the students (trunk, roots, leaves, bud, flower, fruit, and seed).</p> <p><b>Tip:</b> Download the digital copies of the Visual Aids at <a href="http://www.californiaeei.org/">www.californiaeei.org/</a>.</p>	<p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.</p>

Procedures	Common Core Standards and Applications
<b>Step 3</b>	
<p>Explain to students that they will learn some hand gestures to imitate the parts of the orange tree involved in producing more oranges. Tell students to observe closely as you make the following gestures to demonstrate how an orange tree grows:</p> <ul style="list-style-type: none"> <li>■ Open your hand so the back of the hand is horizontal to floor. Then, stretch your fingers and thumb toward the ceiling and pull fingertips together to make a “bud” shape. Explain that this is an orange bud.</li> <li>■ Stretch your fingers apart, keeping them rounded, and ask, “What does the bud turn into?” (<i>Flower</i>)</li> <li>■ Make a fist and ask students, “What does the middle part of the flower turn into?” (<i>An orange or a fruit</i>) Then ask, “What is inside?” (<i>Seeds</i>)</li> <li>■ Open your hand, pretend to pick up a seed. Ask, “What can these seeds grow into?” (<i>Small trees or seedlings that can grow into new trees.</i>)</li> <li>■ With your thumb and pointer finger joined, stretch your hand up to simulate a growing tree.</li> <li>■ Return to the bud shape.</li> </ul> <p>Explain that the orange plant needs all of these parts to produce more orange trees. Using the <b>Word Wall Card</b>, explain the term “reproduction.” Have students repeat the motions with you. Repeat the cycle faster, while you call out “Bud, flower, fruit, seed, seedling, bud.” (<i>Note: To show that this is the same process for some other plants, tell students to imagine they are an apple tree and repeat the same words and motions.</i>)</p>	<p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text relevant to a <i>grade 2 topic or subject area</i>...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p> <p><b>Suggestion:</b> Have students then turn to a partner and pretend they are an apple tree and repeat the same words and motions.</p>
<b>Step 4</b>	
<p>Refer again to the <b>Word Wall Cards</b> for “bear,” “bud,” “flower,” and “seed.” Read the definitions with the students. Explain to students that some words can have more than one meaning, for example, the bud on the orange tree may turn into a flower (nouns), and in the spring, the orange tree buds and then flowers (verbs). Have students help you correctly use each word and each meaning in a sentence. Ask students, “Which of these words have to do with plant reproduction?” (<i>All four</i>)</p>	<p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text relevant to a <i>grade 2 topic or subject area</i>...</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...texts...proficiently...</p> <p><b>L.2.4:</b> Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 2 reading and content</i>...</p> <p>a) Use sentence-level context as a clue to the meaning of a word or phrase.</p> <p><b>Suggestion:</b> Generate a worksheet on multiple-meaning words for students to complete for homework.</p>

Procedures	Common Core Standards and Applications
<b>Step 5</b>	
<p>Distribute a <b>Student Workbook</b> to each student. Tell students to turn to <b>Parts That Help an Orange Tree Reproduce</b> (Student Workbook, page 2). Review instructions with students and have students complete the <b>Parts That Help an Orange Tree Reproduce</b>.</p> <p>Gather <b>California Connections: Mother Orange Tree</b> readers.</p> <p>Collect <b>Student Workbooks</b> and use <b>Parts That Help an Orange Tree Reproduce</b> for assessment.</p> <p><b>Tip:</b> <i>If Student Workbooks need to be reused from year to year, students should not write in them. Some strategies teachers use to preserve the workbooks are:</i></p> <ul style="list-style-type: none"> <li>■ Have students use binder paper or other lined or unlined paper</li> <li>■ Have students use a sheet protector over the page and write with a whiteboard marker</li> <li>■ Do together as a class on a projector or chart paper</li> <li>■ Project the digital fill-in version and do together as a class</li> <li>■ Students use digital devices to fill in the digital version found on the website.</li> <li>■ Make student copies when necessary</li> </ul>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding of key details in a text.</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...texts...proficiently...</p> <p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>

## Lesson 2: People Depend on Plant Reproduction

Students study photographs of three common plants that grow in California. They identify the parts of each plant needed for reproduction. They create collages of these plants and discuss why plant reproduction matters to humans and other animals.



Use this correlation in place of the **Procedures** on pages 48–49 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
<b>Vocabulary Development</b>	
Use the <b>Dictionary Workbook</b> and the <b>Vocabulary Word Wall Cards</b> to introduce new words to students as appropriate.	<b>L.2.4e:</b> Use glossaries and beginning dictionaries...to determine or clarify the meaning of words and phrases...
<b>Step 1</b>	
Review the terms “crop,” “feed,” “fiber,” “material,” “resource,” and “wood” using the <b>Word Wall Cards</b> . When reviewing the words “crop” and “feed,” tell students that these words have two meanings. Have students help you use each meaning for each word in a sentence.	<p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text relevant to a <i>grade 2 topic or subject area</i>...</p> <p><b>L.2.4:</b> Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 2 reading and content</i>.</p> <p>a) Use sentence-level context as a clue to the meaning of a word or phrase.</p>
<b>Step 2</b>	
Project <b>Ways People Use Apples</b> (Visual Aid #2). Read the text with the students. Point to the first photograph and ask students, “Which parts of the apple tree are needed for the apple tree to reproduce?” ( <i>Flower, fruits, seeds</i> ) Point to the other photographs and ask students, “How are apples used by humans and other animals?” ( <i>To eat fresh or as applesauce, juice, or pie filling.</i> )	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details...</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...texts...proficiently...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from...information presented orally or through other media.</p>
<b>Step 3</b>	
Project <b>Ways People Use Cotton</b> (Visual Aid #3) and then <b>Ways People Use Oak</b> (Visual Aid #4). Read aloud the text on the visual aids and ask students what each plant needs to be able to reproduce, and how people use the plants and their parts.	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from...information presented orally or through other media.</p>
<b>Step 4</b>	
Call students’ attention to the <b>Ways People Use Plants Chart</b> . Ask the class for examples of the ways people use apple trees, cotton plants, and oak trees. Record students’ suggestions on the <b>Ways People Use Plants Chart</b> . ( <i>Note: Sample answers are provided in the chart below.</i> )	<p><b>SL.2.2:</b> Recount or describe key ideas or details from...information presented orally or through other media.</p> <p><b>W.2.7:</b> Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).</p>

Procedures	Common Core Standards and Applications
<b>Step 5</b>	
<p>Organize the class into groups of four students. Distribute a set of <b>Collage Materials</b> to each group. Assign each group one of the three plants—apple tree, oak tree, or cotton plant. Tell group members to find and cut out pictures of the plant parts and products made from their assigned plant. Tell students to draw pictures if they cannot find examples. Direct them to glue their pictures onto the construction paper to make a collage. For example, the oak tree group might find and cut out pictures of a table and chairs to show the oak tree’s uses, and glue them next to a “tree trunk” they have drawn.</p> <p>When finished, display the collages.</p>	<p><b>SL.2.1:</b> Participate in collaborative conversations with diverse partners about <i>grade 2 topics and texts</i> with peers...in small and larger groups.</p> <p>a) Follow agreed-upon rules for discussions...</p> <p><b>Suggestion:</b> Establish rules for discussion from the beginning of the year and review them with students before assigning this task.</p>
<b>Step 6</b>	
<p>Write the following question on the board, “Why does _____ reproduction matter to humans?”</p> <p>Focus on this question as you and students discuss each group’s collage.</p> <p>When time is up, call students’ attention to the apple collage made by one of the groups and ask them: “How many apples do you eat in a year?” Have them imagine how many more Californians (about 38 million) might eat apples or feed them to animals. Then ask students to imagine each apple tree bearing hundreds of flowers that turn into apples. Have them visualize the rows upon rows of apple trees needed to grow all those apples!</p> <p>Then, ask students to answer the question written on the board, “Why does apple reproduction matter to humans?” (<i>Apples are fruits that contain the seeds that are part of an apple tree’s reproduction. Apple trees provides people with a resource, food.</i>)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details in a text.</p> <p><b>SL.2.1:</b> Participate in collaborative conversations with diverse partners about <i>grade 2 topics and texts</i> with peers...in small and larger groups.</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 7</b>	
<p>Repeat the process with the oak tree collages. Ask students, “Which part of the oak tree contains the seeds? (<i>Acorns</i>) Ask them to imagine how many acorns would be needed to grow enough trees to provide lumber to build houses and heat homes. As you discuss oak trees, ask students, “Why does oak reproduction matter to humans?” (<i>Acorns are the fruits that contain seeds that can grow into more oak trees, which people use for lumber.</i>)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details...</p> <p><b>SL.2.1:</b> Participate in collaborative conversations...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented...</p>
<b>Step 8</b>	
<p>Repeat the process as you point to the cotton plant collages. Ask students, “Which part of the cotton plants contain the seeds?” (<i>The fruit, called a cotton boll.</i>) Ask them to imagine how many cotton bolls and fibers would be needed to make all the shirts and pants in the class. Again, ask students, “Why does oak reproduction matter to humans?” (<i>People use the cotton bolls to make clothes. The bolls are the fruits of the plant that contain seeds to grown more cotton plants.</i>)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key...</p> <p><b>SL.2.1:</b> Participate in collaborative conversations...in small and larger groups.</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 9</b>	
<p>Gather <b>Collage Materials</b> from each group.</p> <p>Collect the students’ collages for assessment.</p>	n/a



## Lesson 3: Ecosystems Help Plants Grow and Reproduce

Students observe photographs and read about blackberries and the natural systems that support their needs, and their reproduction. They study the Joshua tree and discuss the conditions it needs to reproduce. They locate the habitats of each of these plants on a map.



## National Geographic Resources

- **Habitats** wall map

Use this correlation in place of the **Procedures** on pages 58–59 of the Teacher’s Edition.

Procedures	Common Core Standards and Applications
<b>Vocabulary Development</b>	
Use the <b>Dictionary Workbook</b> and the <b>Vocabulary Word Wall Cards</b> to introduce new words to students as appropriate.	<b>L.2.4e:</b> Use glossaries and beginning dictionaries...to determine or clarify the meaning of words and phrases...
<b>Step 1</b>	
<p>Review the terms “berry,” “ecosystem,” “moisture,” “nutrient,” “pollinate,” “shrub,” “soil,” “temperature,” and “water” using the <b>Word Wall Cards</b>. Explain to students that “water” has two meanings: “a liquid that falls as rain and makes up rivers, lakes, and seas” (noun), and “to wet or put water on something” (verb).</p> <p>Emphasize that an “ecosystem” is made up of living and nonliving things that are found together and that affect each other. Ask students, “What are some things in an ecosystem that plants need to grow and survive?” (<i>Soil, water, nutrients, animals, sunlight, and the right temperatures</i>) Tell students that the foods that we eat each day provide the nutrients we need to live. Explain that the nutrients plants need to help them live and grow are in soil and water.</p>	<p><b>L.2.4:</b> Determine or clarify the meaning of unknown and multiple-meaning words...</p> <p>a) Use sentence-level context as a clue to the meaning of a word or phrase.</p> <p><b>RI.2.1:</b> Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding...</p> <p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 2</b>	
<p>Point out the <b>Habitats</b> wall map and tell students that California blackberries often grow in oak woodlands. Point to the map key and identify the symbol for “oak woodlands” (plant communities with many oak trees). Ask a student to come to the <b>Habitats</b> wall map and point to a few areas that contain oak woodlands.</p> <p>Call students’ attention to the inset illustration for oak woodlands and identify examples of other plants and animals that live there (black-tailed deer, valley oak, acorn woodpecker, western bluebird).</p> <p>Point out the approximate location of your community on the <b>Habitats</b> wall map and ask a student to find the nearest oak woodlands. Explain that blackberries also grow in other moist and shady places, such as along creeks, in canyons, and in wooded habitats changed, for example, by building houses or roads.</p>	<p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>

Procedures	Common Core Standards and Applications
<b>Step 3</b>	
<p>Project <b>What Blackberries Need and Where They Get It 1 and 2</b> (Visual Aids #5–6). Read aloud the text on each of the visual aids and explain that the woodland environment meets the needs of wild blackberries. It provides the water, moist soil, sunlight with some shade, and the space they need to grow and to develop flowers and fruits with seeds. After you read the text with each photograph, discuss the corresponding points below:</p> <ul style="list-style-type: none"> <li>■ <b>Water:</b> Point out the stream and moist soil in the photograph. Tell students that blackberries grow best near rivers and streams.</li> <li>■ <b>Sunlight and shade:</b> Point out that there is sunlight in this forest. Explain that tall trees give the blackberries shade, but too many trees close together can block the sunlight from the blackberry bushes.</li> <li>■ <b>Space:</b> Mention that blackberry plants spread out as they grow so they need lots of space. Tell students that blackberries often grow in the clearings made after logging or a fire.</li> </ul>	<p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 4</b>	
<p>Divide students into groups of three or four. Distribute a set of <b>Would Blackberries Grow...?</b> (Information Cards #1–4) to each group. Have group members look at each information card and discuss if this habitat has what blackberries need to grow and reproduce (water or moist soil, sunlight, shade, space).</p> <p>After students have viewed the information cards in their groups, hold up each information card and ask the class to describe the conditions they saw in each habitat. Ask students, “Were the conditions you saw the right conditions for the blackberries to grow in these locations?”</p> <ul style="list-style-type: none"> <li>■ Stream running through a woodland along a stream bank (<i>Yes, there is sunlight and shade, space, and water from river for moist soil.</i>)</li> <li>■ Desert (<i>No, there is not enough water or moist soil, no shade, but there is a lot of space.</i>)</li> <li>■ Open forest (<i>Yes, there is moist soil, sunlight, shade, and a lot of space.</i>)</li> <li>■ Playground (<i>No, there is not any soil there, no shade, no water, even though there is a lot of space.</i>)</li> </ul> <p>Review with students the basic things that plants need to reproduce: sunlight, soil, nutrients, and water. Ask students, “Where do plants get these needs met?” (<i>In the habitat or ecosystem where they live.</i>)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details in a text.</p> <p><b>RI.2.7:</b> Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.</p> <p><b>SL.2.1:</b> Participate in collaborative conversations with diverse partners about <i>grade 2 topics and texts</i> with peers...in small and larger groups.</p> <p>b) Follow agreed-upon rules for discussions...</p>

Procedures	Common Core Standards and Applications
<b>Step 5</b>	
<p>Have students return to their desks. Redistribute the students' individual <b>Student Workbooks</b>. Tell them to turn to <b>What a Joshua Tree Needs from the Desert</b> (Student Workbook, pages 3–4). Call students' attention to the photograph at the top of the page and explain that the largest plant is called a, "Joshua tree." Point to the <b>Habitats</b> wall map and show them the "High Desert." Tell students that Joshua trees live in High Desert. Tell students that this habitat is called "high" desert because the area is above sea level.</p> <p>Guide the class in a brief study of <b>What a Joshua Tree Needs from the Desert</b> by asking:</p> <ul style="list-style-type: none"> <li>■ What do you see in the top photograph? (<i>Desert ecosystem—Mojave Desert</i>)</li> <li>■ What part of a Joshua tree is in this picture? (<i>Flower</i>)</li> <li>■ What animal do you see on the Joshua tree flower? (<i>Yucca moth and a grasshopper</i>)</li> <li>■ How can you tell this picture shows a desert? (<i>It is dry and has cactus and other desert plants.</i>)</li> </ul> <p>Read aloud the first page of <b>What a Joshua Tree Needs from the Desert</b> while the students follow along silently. (<i>Note: You may also have volunteers take turns reading a sentence.</i>) After reading, ask, "What do Joshua trees need to reproduce? (<i>Full sunlight, soil, nutrients, water, animals that help with pollination.</i>)"</p>	<p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p> <p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...texts...proficiently...</p>
<b>Step 6</b>	
<p>Call students' attention to the inset illustration on the <b>Habitats</b> wall map and identify the plants and animals that live in the High Desert (roadrunner, desert tortoise, beaver-tail cactus, desert bighorn sheep). Ask students, "What other plants or animals that live in the High Desert?" (<i>Desert iguana, rattlesnake, desert gecko, barrel cactus, burrowing owl</i>) Point out the approximate location of your community on the <b>Habitats</b> wall map and ask a student to find the High Desert.</p>	<p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 7</b>	
<p>Instruct students to independently answer the questions on page 2 of <b>What a Joshua Tree Needs from the Desert</b>.</p> <p>Gather information cards.</p> <p>Collect <b>Student Workbooks</b> and use <b>What a Joshua Tree Needs from the Desert</b> for assessment.</p>	<p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>

## Lesson 4: Plants Change in a Changing Environment

Students study photographs of plants affected by a variety of environmental changes related to sunlight, water, and temperature. They apply this knowledge as they draw and describe how drought, frost, or too much shade can affect particular plants.



Use this correlation in place of the **Procedures** on page 74 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
<b>Vocabulary Development</b>	
Use the <b>Dictionary Workbook</b> and the <b>Vocabulary Word Wall Cards</b> to introduce new words to students as appropriate.	<b>L.2.4e:</b> Use glossaries and beginning dictionaries...to determine or clarify the meaning of words and phrases...
<b>Step 1</b>	
Review the terms "drought," "environment," "flood," "freeze," "frost," "germination," "stress," and "wilt" using the <b>Word Wall Cards</b> . Explain that the words "freeze" and "stress" have more than one meaning; review the different meanings of each word.	<p><b>L.2.4:</b> Determine or clarify the meaning of unknown and multiple-meaning words...</p> <p><b>RI.2.4:</b> Determine the meaning of words and phrases in a text...</p>
<b>Step 2</b>	
<p>Ask students to think about the plants they have been studying. Ask, "What are some things that the environment provides that plants need to grow and survive?" (<i>Water, soil, sunlight, and correct temperatures</i>) Ask students, "What happens when the amount of water provided by the rain and snow changes?" (<i>Accept all reasonable answers.</i>)</p> <p>Project <b>Not Enough Water</b> (Visual Aid #7). Ask students, "What is it called when there is a period of time when there is little rain or snow?" (<i>Drought</i>) Point to the photograph and have students read along silently as you read the text aloud. (<i>Note: You may also have volunteers take turns reading a sentence.</i>) Ask students, "What can happen to oak trees during a long drought?" (<i>Some oak trees may die.</i>)</p> <p>Clarify for students the difference between a naturally dry area, such as a desert, and an area going through a drought (the latter is stressful for the plants growing in a naturally wetter area.)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding of key details in a text.</p> <p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...proficiently...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>

Procedures	Common Core Standards and Applications
<b>Step 3</b>	
Project <b>Too Much Water</b> (Visual Aid #8). Ask students, "What is it called when there is too much rain and a river or stream overflows its banks?" ( <i>A flood</i> ) Point to the photograph and have students read along silently as you read the text aloud. ( <i>Note: You may also have volunteers take turns reading a sentence.</i> ) Ask students, "What can happen to cottonwood trees during a big flood?" ( <i>Some cottonwoods may not grow as much. Some plants may die.</i> )	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details...</p> <p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...proficiently...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 4</b>	
Remind students that in the last lesson they learned that blackberries need both sunlight and shade to grow. Ask them, "What would happen if there were too much shade?" ( <i>The blackberries might not grow as well. They might not grow as much fruit. They might die.</i> )	<p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 5</b>	
<p>Tell students that just as changes in the amount of water or sunlight can stress plants, so can big changes in temperature. Ask students, "What do you think would happen to many types of plants if temperatures get too hot?" (<i>They might not grow as well. They might die.</i>)</p> <p>Project <b>When Temperatures Change</b> (Visual Aid #9). Have the students read along silently as you read the text aloud. (<i>Note: You may also have volunteers take turns reading a sentence.</i>) Ask students, "What can happen to young orange trees during a frost?" (<i>The cold temperatures may kill them or prevent them from reproducing.</i>)</p>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who, what, where, when, why, and how</i> to demonstrate understanding of key details...</p> <p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>RI.2.10:</b> ...read and comprehend informational texts, including...science...proficiently...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 6</b>	
<p>Redistribute students' individual <b>Student Workbooks</b>. Tell them to turn to <b>What Might Happen to the Plant?</b> (Student Workbook, pages 5–7). Have students draw a picture and write a sentence to answer each question. When finished, review answers and allow students to correct any misconceptions.</p> <p>Collect <b>Student Workbooks</b> and <b>What Might Happen to the Plant?</b> for assessment.</p>	<p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>

## Lesson 5: When People Change Plants' Habitats

Students view and discuss photographs showing children interacting with plants. They work in small groups and discuss photographs showing human activities that stress plants. They answer questions and sort sequence statements about human practices that can affect plant growth and reproduction.



Use this correlation in place of the **Procedures** on page 86 of the Teacher's Edition.

Procedures	Common Core Standards and Applications
<b>Vocabulary Development</b>	
Use the <b>Dictionary Workbook</b> and the <b>Vocabulary Word Wall Cards</b> to introduce new words to students as appropriate.	<b>L.2.4e:</b> Use glossaries and beginning dictionaries...to determine or clarify the meaning of words and phrases...
<b>Step 1</b>	
<p>Review the terms “dune” and “native” using the <b>Word Wall Cards</b>.</p> <p>Remind students that in the last lesson they learned that changes in the environment could stress plants. Explain that human activities can also stress plants and affect whether they can grow and live. Project <b>People and Plants</b> (Visual Aid #10). Pointing to the left photograph, ask students:</p> <ul style="list-style-type: none"> <li>■ What is the girl doing? (<i>Watering a plant.</i>)</li> <li>■ What does this do to the plant? (<i>It makes the plant healthier.</i>)</li> <li>■ Is this helpful or harmful? (<i>Helpful</i>) Why? (<i>Plants need water. They would die without it.</i>)</li> </ul> <p>Point to the right photograph and ask students:</p> <ul style="list-style-type: none"> <li>■ What is the child doing? (<i>Walking on the plant and knocking down the flower.</i>)</li> <li>■ How is it affecting the plants? (<i>It broke the plant and crushed the flower.</i>)</li> <li>■ Is this helpful or harmful for the plant? (<i>Harmful</i>) Why? (<i>Flowers cannot grow anymore on the broken stems.</i>)</li> </ul>	<p><b>RI.2.1:</b> Ask and answer such questions as <i>who</i>, <i>what</i>, <i>where</i>, <i>when</i>, <i>why</i>, and <i>how</i> to demonstrate understanding of key details in a text.</p> <p><b>RI.2.6:</b> Identify the main purpose of a text, including what the author wants to answer, explain, or describe.</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 2</b>	
<p>Organize students into groups of three to four students. Distribute a set of <b>Driving Over Dune Plants, Letting Weeds Take Over a Garden, and Spraying to Kill Weeds</b> (Information Cards #5–7) to each group.</p> <p>Redistribute students’ individual <b>Student Workbooks</b>. Tell them to turn to <b>Things People Do That Stress Plants</b> (Student Workbook, pages 8–9). Tell students that they will work together to discuss each information card, but they are each to write answers on <b>Things People Do That Stress Plants</b>.</p>	<p><b>RI.2.1:</b> Ask and answer...questions...to demonstrate understanding of key details...</p> <p><b>SL.2.1:</b> Participate in collaborative conversations...in small and larger groups.</p> <p>a) Follow agreed-upon rules for discussions...</p> <p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>

Procedures	Common Core Standards and Applications
<b>Step 3</b>	
<p>Call students' attention to the first information card <b>Driving Over Dune Plants</b>. Look at the top photograph and read the text together. Then, discuss the first question on <b>Things People Do That Stress Plants</b>, "What is this person doing?" (<i>Driving over a sand dune</i>.) Have students complete the remaining two questions under "<b>Driving Over Dune Plants</b>," then briefly review the answers with the class.</p> <p>Tell the student groups to look at the <b>Letting Weeds Take Over a Garden</b> and <b>Spraying to Kill Weeds</b> information cards and answer the three questions on <b>Things People Do That Stress Plants</b> for each card.</p>	<p><b>RI.2.1:</b> Ask and answer...questions...to demonstrate understanding of key details...</p> <p><b>RI.2.7:</b> Explain how specific images...contribute to and clarify a text.</p> <p><b>SL.2.1:</b> Participate in collaborative conversations...in small and larger groups.</p> <p>a) Follow agreed-upon rules for discussions...</p> <p><b>SL.2.2:</b> Recount or describe key ideas or details from... information presented orally or through other media.</p>
<b>Step 4</b>	
<p>Tell students to turn to <b>Ways People Stress Plants</b> (Student Workbook, page 10). Review the instructions and provide time for students to answer the questions.</p> <p>Gather information cards.</p> <p>Collect <b>Student Workbooks</b> and use <b>Things People Do That Stress Plants</b> and <b>Ways People Stress Plants</b> for assessment.</p>	<p><b>W.2.8:</b> Recall information from experiences or gather information from provided sources to answer a question.</p>

## Unit Assessment

Refer to the introduction pages at the front of this document for information regarding the Traditional and Alternative Assessments for this unit and their Common Core correlations.



### California Common Core State Standards Descriptions

#### Language Standards

- **L.2.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2 reading and content*, choosing flexibly from an array of strategies.
  - a) Use sentence-level context as a clue to the meaning of a word or phrase.
  - e) Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases **in all content areas. CA**

#### Reading Standards for Informational Text

- **RI.2.1:** Ask and answer such questions as *who, what, where, when, why*, and *how* to demonstrate understanding of key details in a text.
- **RI.2.3:** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- **RI.2.4:** Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*. **(See grade 2 Language standards 4–6 for additional expectations.) CA**
- **RI.2.6:** Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
- **RI.2.7:** Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
- **RI.2.10:** By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

#### Speaking and Listening Standards

- **SL.2.1:** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.
  - a) Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
  - b) Build on others' talk in conversations by linking their comments to the remarks of others.
- **SL.2.2:** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

#### Writing Standards

- **W.2.2:** Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
- **W.2.7:** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
- **W.2.8:** Recall information from experiences or gather information from provided sources to answer a question.